

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1 - 42. (Canceled)

43. (Currently Amended) A method of inhibiting corrosion on a metal substrate with a material comprising:

preparing a metal substrate;

~~forming a barrier, placing a corrosion inhibitor near the metal substrate to~~
inhibit corrosion of said metal substrate, ~~of a corrosion inhibitor relative to said~~
~~substrate;~~

wherein the ~~barrier~~ corrosion inhibitor is formed including:

an oxo-anion including the general formula A_NO_N , wherein A is a selected element, O is oxygen, and N is ~~a number~~ an integer equal to 1 or higher; and

an oxidic acid having the general formula $H_NA_NO_N$, wherein H is hydrogen, A is a selected element, O is oxygen, and N is an integer equal to 1 or higher;

wherein said ~~barrier~~ corrosion inhibitor is operable to inhibit corrosion relative to said metal substrate.

44. (Previously Presented) The method Claim 43, wherein preparing a metal substrate includes forming a component including an aluminum alloy.

45. (Previously Presented) The method of Claim 43, wherein preparing a metal substrate includes painting said metal substrate with a material to form a first coating on said metal substrate.

46. (Currently Amended) The method of Claim 43, wherein ~~forming~~ placing a barrier corrosion inhibitor relative to said substrate includes at least one of spraying said corrosion inhibitor relative to said substrate, dipping said metal substrate in said corrosion inhibitor, brushing said corrosion inhibitor on said metal substrates, absorbing said corrosion inhibitor into said metal substrate, or combinations thereof.

47. (Currently Amended) The method of Claim 43, wherein the corrosion inhibitor further includes a cation operable to substantially inhibit propagation of ~~[[the]]~~ a pit corrosion in said metal substrate.

48. (Previously Presented) The method of Claim 47, wherein said cation is selected from a group comprising a transition metal, an alkaline earth metal, a rare earth metal, a lanthanide series element, or combination thereof.

49. (Previously Presented) The method of Claim 47, wherein said oxo-anion and said cation form a salt operable to substantially inhibit corrosion.

50. (Previously Presented) The method of Claim 49, further comprising absorbing said salt into said metal substrate.

51. (Currently Amended) The method of Claim 47, wherein said oxo-anion, said cation, and said oxidic acid form a supramolecule to substantially inhibit a corrosion relative to said metal substrate.

52. (Previously Presented) The method of Claim 51, further comprising absorbing said supramolecule into said metal substrate.

53. (Previously Presented) The method of Claim 43, wherein at least one of said oxidic acid or said oxo-anion form a supramolecule to substantially inhibit the corrosion of said metal substrate.

54. (Currently Amended) The method of Claim 43, further comprising forming a supramolecule of said oxo-anion and said oxidic acid in an aqueous solution to substantially form the material to form said ~~coating~~ corrosion inhibitor.

55. (Currently Amended) The method of Claim 43, wherein forming a ~~coating of a material~~ corrosion inhibitor further ~~include~~ includes forming a salt of a cation and said oxo-anion.

56. (Previously Presented) The method of Claim 55, wherein said salt has a general formula of $(D_N)((H_N A_N O_N)_N (A_N O_N)_N (H_2 O)_N)_N$;
wherein D is a metal cation.

57. (Currently Amended) The method of Claim 43, wherein A is selected from a group comprising molybdenum, phosphorous, tungsten, silicon, or a combination thereof.

58. (Previously Presented) The method of Claim 43, further comprising:
forming a polymer of said oxo-anion and said oxidic acid;
wherein said polymer is operable to allow release of said oxo-anion to
substantially inhibit corrosion of said substrate.

59. (Previously Presented) The method of Claim 58, wherein said polymer
releases said oxo-anion in a moisture rich environment.

60. – 72. (Canceled)

73. (Currently Amended) The method of Claim 43, ~~wherein forming a
barrier includes~~ further comprising: forming a mixture effective to inhibit corrosion when
applied to the prepared metal substrate.

74. – 84. (Canceled)

85. (Previously Presented) The method of Claim 51, wherein the
supramolecule has the general formula $(H_N A_N O_N)_N (A_N O_N)_N (H_2 O)_N$:

86. (New) A method of inhibiting corrosion on a metal substrate with a material comprising:

preparing a metal substrate; and

forming a corrosion inhibitor including a supramolecule of at least one of:

an oxo-anion including the general formula $A_N O_N$, wherein A is a selected element, O is oxygen, and N is an integer equal to 1 or higher; and

an oxidic acid having the general formula $H_N A_N O_N$, wherein H is hydrogen; and

placing the corrosion inhibitor near said metal substrate to inhibit corrosion of said metal substrate;

wherein said corrosion inhibitor is operable to inhibit corrosion relative to said metal substrate.

87. (New) The method of Claim 86, further comprising forming a supramolecule of said oxo-anion and said oxidic acid in an aqueous solution to substantially form the material to form said corrosion inhibitor.

88. (New) The method of Claim 86, further comprising forming a supramolecule of both of said oxo-anion and said oxidic acid.

89. (New) The method of Claim 88, wherein the supramolecule has the general formula $(H_N A_N O_N)_N (A_N O_N)_N (H_2 O)_N$.

90. (New) The method of Claim 86, further comprising: forming a mixture of the oxo-anion and the oxidic acid effective to inhibit corrosion when applied to the prepared metal substrate.